Sai Shashank Kudkuli

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EDUCATION

University of Maryland   August 2024 - December 2025
Master of Science, Information Systems   *Current GPA: 3.934/4.0*

COURSEWORK

Digital Business Transformation, Business Process Analysis, Data Visualization, Project Management, Cloud Computing and Big Data, Statistical Analysis with R

TECHNICAL SKILLS

Core Data & Analytics: Python, SQL, R, Polars, Spark, Snowflake, HiveQL, Tableau, Power BI, Excel
AI/ML: LLM Evaluation, Prompt Engineering, Retrieval-Augmented Generation (RAG), Neo4j, HuggingFace Transformers, Fine-tuning (Gemma) using LORA optimization, Streamlit
Cloud & Infrastructure: AWS, GCP, Azure, Docker, HDFS, Git, CI/CD, CRON, Docker
Business Tools: Microsoft Project, Feasibility Analysis, Functional Modeling, Process Documentation

EXPERIENCE

R.H. Smith School of Business | *Research Assistant* | aimaps.ai   November 2024 - Present
- Optimized Snowflake SQL queries and built batch processing pipelines using Polars, reducing data processing time from 2 hours to 15 minutes for 100M+ job market records.
- Developed ETL systems integrating 5 disparate data sources to support AI Jobs Dashboard for labor market research.
- Designed and implemented LLM evaluation pipelines, benchmarking GPT-4, Claude, Llama-3, and Qwen across 10K+ job-posting dataset, producing model selection insights adopted in academic research and CNN/WSJ-featured reports.

Oracle Cerner | *System Engineer*   September 2022 - December 2023
- Resolved critical Linux application and Sybase database issues for hospital systems, reducing incident tickets from 20 to 5 per week while maintaining 24/7 availability.
- Collaborated with client IT teams to troubleshoot server incidents, achieving 75% improvement in mean time to resolution.

Accenture | *SAP Consultant*   July 2021 - July 2022
- Analyzed and resolved 500+ SAP Warehouse Management issues, maintaining 95% SLA compliance for supply chain operations.
- Created Standard Operating Procedures during ServiceNow migration, reducing process violations by 80%.

PROJECTS

Dynamic Surge Pricing using Regression | *PySpark, Docker, Vertex AI, BigQuery, Pub/Sub*   May 2023 – August 2023
- Built a PySpark regression model on Seattle parking dataset to predict availability and apply surge pricing rules, trained on 2022 data and deployed for 2023 live stream.
- Containerized pipeline with Docker, deployed on Vertex AI, automated ingestion via Pub/Sub with results stored in BigQuery, and visualized live surge pricing on Streamlit.

Graph Search MCP | *Neo4J, FastMCP* | *github*   June 2025
- Built an AI-ready knowledge graph platform by integrating Neo4j with LLMs via the Model Context Protocol (MCP), enabling scalable natural-language queries over graph data; containerized and deployed with Docker for consistent, portable environments.
- Fine-tuned Gemma 3n model using LoRA optimization on relationship data, improving relation extraction and understanding accuracy.
- Developed and evaluated hybrid graph + LLM retrieval systems, combining symbolic traversal with neural reasoning; achieved a **73% improvement** in retrieval accuracy over vector-only baselines.

LEADERSHIP & RECOGNITION

Smith Master's IS Association | *VP Finance*   January 2025 - Present
- Developed mentorship program connecting 100+ students and alumni. *Featured in university article for AI integration.*

Winner: AI in Business Case Competition – Designed AI integration strategy for digital business transformation.   November 2024

Oracle Cerner: Stakeholder Recognition Award – Service excellence in resolving critical hospital system outages.   2023

Accenture: "Celebrates Excellence" Award – Top 10% of analyst cohort for exceptional performance.   2022